

*Contains Highly Confidential Materials
Subject to Protective Order*

fact will *reduce* price competition, because there is no incentive in this but-for world for drug companies to reduce ASPs from the monopoly level as competition enters.¹⁰²

106. Note that *raising* both ASP and AWP while preserving the 30% margin required by the Hartman formula would *increase* prices on PADs to physicians and reimbursement rates to plaintiffs. However it would also *increase* spreads to health care providers in dollar terms (*i.e.*, 30% of a higher ASP). According to the liability theories of the Hartman analysis, physicians would have an incentive to choose the most expensive therapies to maximize the base on which the 30% spread is calculated. Thus competition may act to pressure AWP and ASP higher rather than lower with corresponding costs to TPPs.
107. In summary, if the firm is constrained by law or regulation from increasing spreads beyond 30%, *ASPs* will be higher than they actually were and AWP may be higher as well. This contradicts Dr. Hartman's position that the ASP will not change in the but-for world. TPPs may be *worse* off in this but-for world because their reimbursements can be *higher* when the spreads are constrained relative to the "as-in" scenario in which the firm is allowed to increase spreads. More generally, based on observation of regulated industries, it is reasonable to conclude that when spreads are capped, competition will occur in other dimensions, such as added advertising or added sales staff, that typically do not pass through as benefits to retail consumers.
108. Dr. Hartman's *per se* rule makes little sense as a public policy. In his model, increased spreads that are expected by payors are recovered from physicians in higher reimbursement discounts. Class members benefit from increased spreads when they bargain for better terms with providers in Dr. Hartman's model. If ignorance of spreads is the problem, a better policy from the point of view of payors is to eliminate the ignorance rather than to eliminate the incentive of manufacturers to cut ASP and replace it with an incentive to raise ASP. I

¹⁰² Note also that a drug company facing competition could not unilaterally implement Dr. Hartman's but-for world. The "first mover" disadvantage would make it unprofitable for the drug company to set lower AWP's, as physicians would have no incentive to buy their drugs and would instead choose to buy competitor drugs that offer higher spreads and hence higher profits, according to the Hartman theory.

*Contains Highly Confidential Materials
Subject to Protective Order*

note also that in the PAD market, a cap in spreads (if it actually constrained provider incentives as Dr. Hartman alleges) may at the margin lead to exit of some physicians, reducing patient access, which could potentially harm consumers.

109. Thus, Dr. Hartman's damages calculations are inconsistent both with his theory of fraud and with basic economic principles and are overstated.

3. *Is the Hartman Formula Short Hand for Changes to Reimbursement Rates?*

110. I have explained why it is not possible to believe that Dr. Hartman's damages formula represents the way that prices would evolve absent the alleged fraud. The damages model, therefore, cannot be seen as plausible on its explicit terms. The question arises, therefore, whether it is possible that the mechanism in the formula is incorrect (that is that ASP would remain unchanged but that AWP would drop to eliminate spreads greater than 30%), but the formula is short hand for an adjustment that would take place through changes in reimbursement rates? Again, the answer is "no."
111. A threshold question is whether in fact reimbursement rates are based on expectations of spreads. In many markets buyers focus on the price they pay rather than on the margin the seller earns. Where margins are important to a decision, buyers seek out that information. When buyers view the information as important, services arise to provide it. Payors have a large number of sophisticated buyers and consultants. Dr. Hartman, however, provides no data that the payors sought out information about spreads in order to inform their reimbursement rates or that data vendors saw a market opportunity and responded to it.
112. Dyckman & Associates, as cited by Dr. Hartman, conducted a survey in which they asked the TPPs to rank the factors which influence the changes in their fee structure. Expectations about spreads was not cited as important in the responses. The three most important reasons given by the TPPs were: 1) "[i]mpact of fee changes on claim costs & premiums," 2)

*Contains Highly Confidential Materials
Subject to Protective Order*

“[i]mpact on plan's ability to maintain an adequate provider network that meets customers' access requirements,” and 3) “[p]arity/consistency with competitor fee levels.”¹⁰³

113. It is not surprising that payors focus on prices to their customers, prices of competitors, and on whether their reimbursement rates are sufficient to attract the network and membership they seek. What this highlights is that knowledge of spreads is not necessary for competition to lead TPPs to adjust reimbursement rates to reflect the effect of spreads. Mike Baderstadt, Director of Provider Relations for John Deere Health (“John Deere”) explained this competitive process clearly when he testified that:

[W]e'd go to minus 25 percent and nobody would sign it and we'd try minus 13 percent and everybody signed up, so we knew we had to have it somewhere in between there. And minus 20 is our latest venture there, and that has produced some headaches for us, but we have been able to put together a reasonable network based on that.¹⁰⁴

114. Thus, TPPs acting in an economically rational manner will always seeks out the lowest reimbursement rate that permits them to assemble the network of physicians they seek.¹⁰⁵ That is, TPPs have the incentive to lower reimbursement rates until the economic incentives of the physician cause the physician to leave the network independent of payors' expectations about spreads.¹⁰⁶ For example, Dr. Berndt stated that:

¹⁰³ MedPAC Study, p. 18.

¹⁰⁴ Deposition of Mike Baderstadt, September 17, 2004 p. 76.

¹⁰⁵ Moreover, note that where TPPs offer only a single reimbursement rate to all physicians, then the rate offered must set high enough to attract the least profitable practice that the network needs. For example, BCBSMA's Mr. Mulrey, for example, noted that Massachusetts's largest payor offers all physicians the same take-it-or-leave-it fee schedule. (Deposition of Michael Mulrey, January 6, 2006 at 55:3-14.).

¹⁰⁶ Contracts with the TPPs are renegotiated frequently so that this price discovery process can occur regularly. For example, the study by Dyckman & Associates also showed that more than 60% of the TPPs renegotiated their contract with providers on an annual basis. (Health Plan for Physician-Administered Drugs, Dyckman Associates, August 2003, p. 14).

*Contains Highly Confidential Materials
Subject to Protective Order*

[I]f health plans shift to a third party supplier of the physician-administered drugs [to reduce costs by capturing the spread], they thereby might risk losing scarce speciality physicians from their physician network who have profited from the 'spread.'¹⁰⁷

115. The same mechanism suggests that even if we assume for purposes of argument that payor expectations were the critical input to the reimbursement rate, it is not necessary for all payors to be informed. Uninformed payors would observe reimbursement rates declining for informed competitors (perhaps through the kinds of public surveys used by Dr. Hartman) and less-informed competitors could respond to that information. Dr. Hartman does not account for this mechanism of competition.¹⁰⁸
116. But even if Dr. Hartman's unsupported assumption that payors' expectations were the critical input to the reimbursement rate and that no payor had accurate expectations is assumed for purposes of argument, the damages estimated by Dr. Hartman would be overstated. The reason is that different payors will have different interest and ability to respond to this information. For example, Dr. Hartman has argued that some TPPs did not respond at all to information about spreads:

Dr. Hartman:

Despite the fact that publicly-available information suggesting increasing spreads became more prevalent in the latter years of the

¹⁰⁷ Berndt Report at p. 42.

¹⁰⁸ See Hartman Deposition at 1029:16-21:

- Q. Have you attempted to analyze the extent to which competition has dissipated any of the effects of the alleged deception that you say exists within respect to physician-administered drugs?
- A. I haven't had the – the data nor I – I haven't been asked to do that, no.

See also Hartman Deposition at 855:1-12, 859:2-5, 860:4-10. Notably, if competition has already flowed through the benefits of price cutting by drug manufacturers to payors, they would benefit twice from defendants' price competition, once in the form of lower reimbursement rates and a second time in the form of damages.

*Contains Highly Confidential Materials
Subject to Protective Order*

Damage Period, TPPs were not able to act on such information for the reasons cited above.¹⁰⁹

The “reasons cited above” appear to be that plaintiffs would have acted no differently even if they had been aware of a difference between the actual spreads and the expected spreads:

Dr. Hartman:

payor's [sic] are not leveraged to know the extent of the AWP scheme or to act upon such knowledge, if they possessed it. Furthermore, given Dr. Berndt's research supporting the “importance of [all drug costs] being unimportant” (“The U.S. Pharmaceutical Industry: Why Major Growth in Times of Cost Containment?” Health Affairs, 20(2), 2001) relative to containment of increases in all managed health care costs, it is not surprising that the small component of all TPP reimbursements reflected by physician-administered drug costs alone, a component that is very expensive to monitor, is not subjected to scrutiny sufficient enough to adjust x% with variation in the AWP used for calculating allowed amounts.¹¹⁰

117. For such payors, elimination of the fraud by publishing spreads might not change reimbursement rates, and if so, their damages would be zero.
118. More generally, Dr. Hartman and the Court have acknowledged that differences in certain characteristics mean that changing expectations about spreads would affect TPP reimbursement rates differently.¹¹¹ For example, some physician groups may have sufficient bargaining power to keep incomes unaffected by changes in expectations about spreads. Dr. Hartman himself appears to acknowledge this when he states that to recover the full effect of the spreads above his yardstick, a payor would need not only information about the

¹⁰⁹ Hartman Declaration, December 15, 2005, p. 42.

¹¹⁰ Hartman Declaration, December 15, 2005, p. 20.

¹¹¹ I have discussed above why Dr. Hartman's use of a 30% discount based on a theory of revealed preferences fails to capture the range of sensitivity to spreads among payors.

*Contains Highly Confidential Materials
Subject to Protective Order*

spread, but market power over the physician as well. As noted previously, Dr. Hartman states that:

Dr. Hartman:

In order to avoid injury, a payor would need full information *and the market power* to force all distributors to disgorge the overcharges paid as a result of the AWP scheme. *No single payer existed* with that degree of knowledge *and that degree of market power*.¹¹²

119. Dr. Hartman explains that there is variance in reimbursement rates, because TPPs vary in their knowledge, negotiating skills, market power, and expectations. If so, one would not expect as Dr. Hartman's damage model assumes, that health care providers could invariably be forced to pass on 100% of their allegedly "secret discounts" in the form of renegotiated reimbursement rates. Thus, the damage estimate presented by Dr. Hartman overstates damages even if one assumes that the yardstick correctly measures expectations in the but-for world.
120. I note also that if changed payors' expectations do affect reimbursement rates, estimating damages correctly requires a case-by-case determination of what expectations were during the class period, how they would differ absent the alleged fraud, and how those differences would be reflected in reimbursement rates.
121. Figure 1 summarizes the alternative liability theories presented by Dr. Hartman and the outcomes that would result for each, none of which is consistent with his measure of damage.

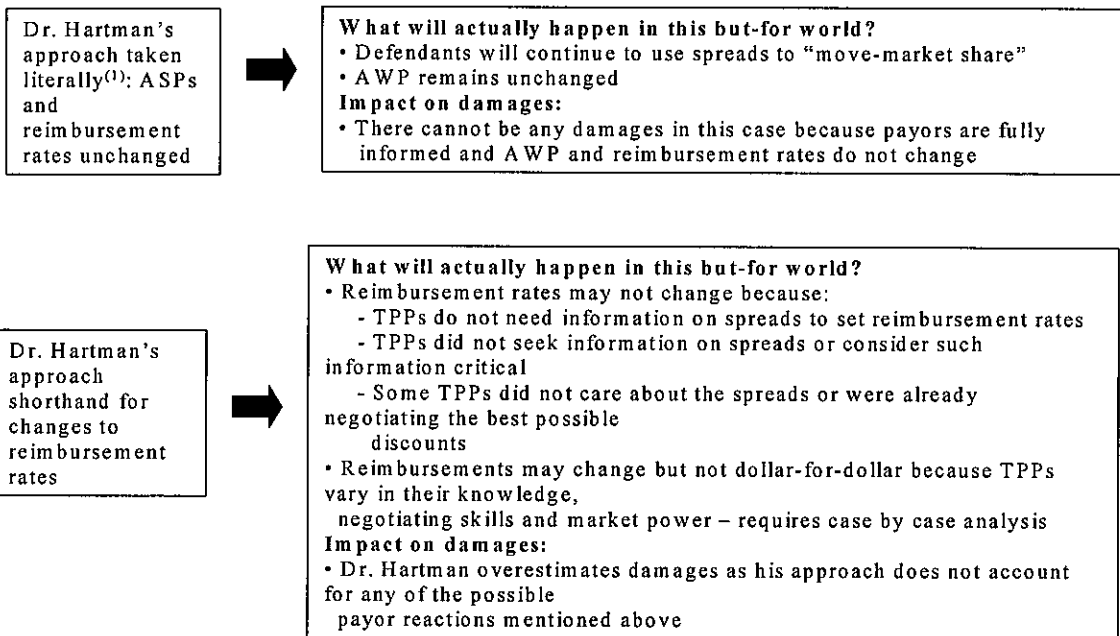
¹¹² Hartman Rebuttal Declaration, December 16, 2004 at FN97, p. 62.

*Contains Highly Confidential Materials
Subject to Protective Order*

Figure 1

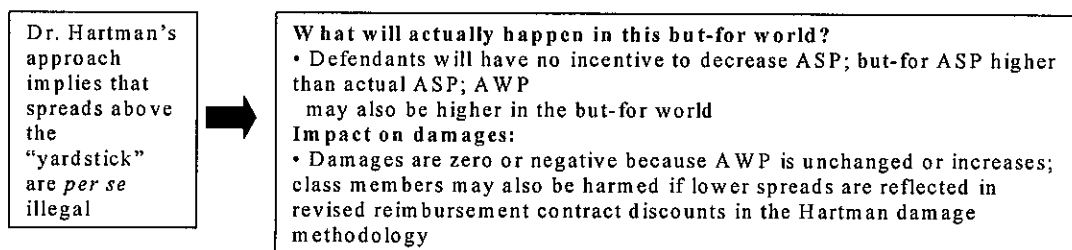
Alleged Problem: Payors Believe AWP Signals Acquisition Cost

Solution: But-For World Where Pharmas Make Clear that AWP Does Not Signal Acquisition Cost



Alleged Problem: Spreads Above 30% are *Per Se* Illegal

Solution: But-For World Where Pharmas Must Keep Spreads Below 30%



(1) Dr. Hartman's formula for non-Medicare = reimbursement rate * (as-is spread – but-for spread) * ASP * quantity. Assumptions: Defendants adjust AWP downward; all other variables remain the same as in the "as-is" world.

*Contains Highly Confidential Materials
Subject to Protective Order*

B. Medicare

122. There is no relationship between a liability claim arising from plaintiffs' expectations of spreads and Dr. Hartman's Medicare damages.¹¹³ Instead, Dr. Hartman relies on a legal interpretation of various statutes even though Dr. Hartman previously claimed no expertise in Medicare reimbursement.^{114, 115}
123. Dr. Hartman changed his theory of liability for Medicare between the filing of his initial report on liability and damages and the filing of his supplement to that report. In his initial report, Dr. Hartman applied the same 30% expectations yardstick to determine liability that was applied to other payors. Dr. Hartman testified that he believed the expectations for Medicare would be the same as for other payors or that Medicare may have been more informed than private payors.¹¹⁶ Despite that belief, which he applied for purposes of liability, his damages analysis for Medicare was based on a but-for spread of zero. Thus, for

-
- ¹¹³ Q: Doesn't the fact that the regulation distinguishes between AWP and EAC suggest that HCFA knew there was a difference between the two?
A: *I don't know what HCFA knew* So I think - I think people understood that the ASP and WAC were less than AWP, and why they wrote the regulations as they did I don't know, but I read the regulations, and if it is the estimated acquisition cost as what it is sold as, it is not sold - they don't acquire it - the physicians don't acquire it at AWP. They acquire it at an estimated acquisition cost." (Hartman Deposition, October 8, 2004, pp. 563-564, Emphasis added)

However Dr. Harman also testified that "[t]he government has set reimbursement rates that reflect an understanding that is comparable to what I would say is the - in my yardsticks." Hartman Deposition at 672:13-16; and regarding his 30% yardstick: "So, that's for government and for non-government. That's the understanding that was in the market." (Hartman Deposition at 1235:11-14).

- ¹¹⁴ Q: You are not an expert on Medicare regulations? Correct?
A: I am not an expert on statutory complexities of Medicare regulations." (Hartman Deposition, October 8, 2004, p. 559)

- ¹¹⁵ Regarding his interpretation of the Medicare statutes, Dr. Hartman testified "Q: What is it that qualifies you to offer that opinion? A: My ability to read. Q: Nothing more? A: That's right." (Hartman Deposition at 881:10-14).

- ¹¹⁶ See Hartman Deposition at 672:7-674:19.

*Contains Highly Confidential Materials
Subject to Protective Order*

Medicare single-source Part B drugs until 2004, if a drug had an spread of less than 30%, Dr. Hartman argued it should have been reimbursed on the basis of AWP, as it was. If a drug had a spread of more than 30%, Dr. Hartman assumed that the drug should have been billed to Medicare and/or reimbursed at the physician acquisition cost:

Dr. Hartman:

For Medicare Part B physician administered drugs, $AWP_{but-for} = AAC = ASP$ by regulation.^[48]

^[48] During the period 1992 through 1997, Medicare reimbursement for all Part B covered drugs was set at the lesser of the estimated acquisition cost (EAC = AAC) or national average wholesale price (AWP), as set forth in 42 C.F.R. § 405.517, which became effective on or about January 1, 1992. On January 1, 1998, 42 C.F.R. § 405.517 was amended to provide that the allowed amount would be based upon the lower of the actual charge on the Medicare claim form (interpreted to be the AAC) or 95 percent of AWP. The equality of AAC and ASP assumes that no rebates are paid.¹¹⁷

124. In the supplement to his report on liability and damages, Dr. Hartman no longer references the expectations of Medicare but assumes that liability exists for all drugs at issue in this case, *regardless* of the expected spread between AWP and ASP.¹¹⁸ He offers no economic justification for this switch.

Dr. Hartman:

There are damages assessed, even though that threshold is not exceeded, which means that the relationship – there are damages assessed even when that – the spread is – does not exceed what people expected it to be.¹¹⁹

125. Mechanically, Dr. Hartman achieves this result by leaving all parameters unchanged from the as-is world and altering the but-for AWP. Of course, it is mathematically impossible to establish the but-for AWP equal to ASP (zero spread) to satisfy Dr. Hartman's claimed legal

¹¹⁷ Hartman Declaration, September 4, 2004, p. 22.

¹¹⁸ Hartman Addendum to Liability and Calculation of Damages, February 3, 2006.

¹¹⁹ Hartman Deposition at 1265:5-9.

*Contains Highly Confidential Materials
Subject to Protective Order*

requirement for Medicare, while setting the but-for AWP at a 30% spread over ASP to satisfy the alleged “market expectation” of the private sector.^{120,121} Thus, there does not exist any AWP that would be consistent with both Dr. Hartman’s Medicare and non-Medicare measures of liability.

126. Because it is based on a legal analysis rather than economics, I make only some limited observations about Dr. Hartman’s Medicare damages theory, focusing for simplicity on his analysis of single-source drugs. First, Dr. Hartman disavows the notion that he is calculating a fraud-free AWP in his Medicare damage claims.¹²² Second, Dr. Hartman’s damages model assumes that PADs would be reimbursed at ASP. If this means that all payors would be reimbursed at the average price (as opposed to each physician being reimbursed based on her individual acquisition cost), the implication is that half of the PADs are administered at a loss. This would create adverse effects on incentives to provide services to Medicare patients. For example, the ASCO study which Dr. Hartman relies upon, states that for Medicare: “The payment method should be designed to fully cover the cost of drugs and not be limited to average or median surveyed costs .” (p. 32) If the payments are based on average costs, the study says that “some physicians may be systematically disadvantaged and not be able to purchase at average price ... any failure to cover an oncologist’s out-of-pocket

¹²⁰ Dr. Hartman acknowledges this point: “For this reason, I distinguish a yardstick for Medicare Part B drugs as 0.00%, merely making the point that the reimbursement rate has been set by regulation below the but-for AWP and at ASP.” Hartman Declaration September 4, 2004, FN52, p. 24.

¹²¹ Further, analogous to the quantum property of sub-atomic particles, the damage model has the property that the spread must go from 31% to 0% without ever passing through the 30% necessary to find no liability.

¹²² In his deposition Dr. Hartman was unable to offer any economic explanation behind the Medicare damage claims in his supplemental damage study. At 1237:18-1238:8, he likened it to a situation where the “speed limit” is 30, but “policemen” are enforcing a requirement for Medicare payors that “they are going zero miles an hour ... they’re standing still on the highway.” See also Hartman Deposition at 1245:9-15, 1265:5-9. When asked at 1278:4-5, what AWP a defendant would have to publish to avoid liability under his Medicare theories, he responded, “you know, I haven’t been asked to do that kind of analysis.” The problem as recognized at 1279:18-21, is that “... in order to avoid that particular calculation of damages, the whole notion of industry and reporting should change” At 1282:2-4 Dr. Hartman states that “... it’s certainly not my testimony or my opinion that the manufacturers should or did post different AWPs [for Medicare and non-Medicare].” See also Hartman Deposition at 662:3-7, 670:18-20.

*Contains Highly Confidential Materials
Subject to Protective Order*

expenses for drugs could easily force the physician to discontinue chemotherapy treatments.”¹²³

127. Finally, I note that in all cases, Dr. Hartman's damages models are incomplete. This is because Dr. Hartman ignores the impact of changes in drug reimbursement rates on related service prices.¹²⁴ To the extent that payors or physicians are concerned about the total payments to a physician for the combined drug and the care associated with administering that drug, changes in the reimbursement rate on drugs may be offset by changes in fees demanded for the related service. For example, I understand that the recent changes to Medicare Part B reimbursement to reflect ASP-based pricing for drugs in the Medicare Modernization Act have been accompanied by substantial increases in payments for drug administration.^{125,126} Similarly, Mr. Mulrey of BCBSMA testified that when he analyzed a switch to ASP-based pricing for PADs, which was not implemented, he incorporated in that analysis an increase on administration fees to physicians.¹²⁷ Dr. Hartman testified that he

¹²³ ASCO Study, p. 32.

¹²⁴ See Hartman Deposition at 1063:16-19, “I have focused entirely on the overcharges induced by the alleged AWP inflation and have not been asked to attempt to do any netting out against that about how other things might change.”

¹²⁵ In a press release announcing the proposals that led ultimately to the changes in the Medicare Modernization Act, CMS Administrator Tom Scully explained that: “We want to make certain that Medicare pays appropriately for the drugs it covers and the costs that doctors incur when administering those drugs...Many doctors tell us they use these overpayments to supplement their office expenses. We want to make sure that we pay them higher rates for treating their patients rather than allow this unbalanced payment system to continue. We ought to pay them the right amount for drugs and services, and this proposed rule will start the process to get us there.” The press release stated that “CMS is also proposing to significantly increase payments under the Medicare physician fee schedule for administering cancer drugs.” See, <http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=828>.

¹²⁶ Dr. Hartman testified that: “[t]he industry as a whole had understandings that were reflected ultimately in the revealed rates that were negotiated - - *the revealed approaches that were discussed in Congress...*” (Hartman Deposition at 674:10-14).

¹²⁷ Deposition of Michael Mulrey, January 6, 2006 at 67:6-68:4.

*Contains Highly Confidential Materials
Subject to Protective Order*

does not know whether such cross-subsidization was necessary but takes his position based on a legal instruction.¹²⁸

VII. COMMENTS ON DR. HARTMAN'S CALCULATIONS TO APPLY HIS THEORY

A. Aggregation Issues

128. In his initial declaration on class certification, Dr. Hartman stated that the calculation of spreads and relevant yardsticks can be performed by time period, by drug and/or by NDC and that he would make a final determination about these issues once the final data are produced.¹²⁹ In his report on liability and damages, Dr. Hartman performed the damage calculations at the NDC-year level but did not provide any justification for why an analysis at this level was an appropriate measure of expectations. In particular, Dr. Hartman did not conduct any tests to validate the view that payors formed expectations at the NDC level and that these expectations were updated each calendar year. As shown below, Dr. Hartman's method of aggregation is arbitrary and likely overstates non-Medicare damages by excluding data points that show spreads below his yardstick level of 30%.
129. The problem with Dr. Hartman's approach is apparent when one examines his pattern of spreads and damages across the time period considered. In several cases, an NDC of a drug goes in and out of liability and damages over time due to the spreads fluctuating above and below the 30% threshold.¹³⁰ Dr. Hartman has not offered any explanation for these patterns. At least in part, these patterns are evidence of volatility in the underlying data on ASPs which can be addressed by aggregating data over longer horizons and/or across NDCs.

¹²⁸ Hartman Deposition at 1055:12-17.

¹²⁹ Hartman Declaration, September 04, 2004, p. 20.

¹³⁰ For example, Procrit 10,000 U/ML, Multidos shows spreads of 27.0%, 45.2%, 34.9%, 29.9% from 1995 to 1998; Intron A INJ 25MIU HSA FREE shows spreads of 23.9%, 30.5%, 35.9%, 28.6% from 1999 to 2002.

*Contains Highly Confidential Materials
Subject to Protective Order*

130. Given the patterns in the data, Dr. Hartman should have considered alternate methods of aggregating data. For example, he could have computed damages by aggregating across all time periods for a particular NDC or aggregating across all NDCs and period for a particular drug. In fact, such aggregations would be more consistent with Dr. Hartman's assumption that the payors' expectations did not change during the class period and that response to new information was characterized by extremely long lags.
131. Table 1 illustrates that Dr. Hartman's damages are sensitive to the way the data is aggregated. Aggregating across time periods for an NDC or across NDCs and periods for a drug, for example, lowers the calculated damages. Column 1 of Panel A shows the Sub-Class 3 aggregate damages as computed by Dr. Hartman for NDCs for which he finds liability but that had spreads less than 30% in some years.¹³¹ Column 2 shows the results if damages are computed by aggregating across all time periods for each NDC. These damages are computed by summing Dr. Hartman's damages across time for each NDC and subtracting "negative" damages from the total. The resulting estimates are significantly lower for certain NDCs. For example, the damages go down from \$0.44 million to \$0.20 million for an NDC of Taxol. Panel B shows the results if damages are computed by aggregating across time periods and NDCs for certain drugs.¹³² This approach yields even lower figures with Procrit and Introl showing zero damages against a 30% yardstick.

¹³¹ Note that the table does not include damages for years in which Hartman extrapolated data to fill in the figures for years in which he had missing data; thus, the damages attributed to Dr. Hartman's methodology (in column 1) are different from the totals listed in his report.

¹³² These damages are computed by summing Dr. Hartman's damages across time and NDCs for each drug and subtracting "negative" damages from the total. The negative damages are obtained for those years and NDCs in which the spread for is less than 30%. This approach is equivalent to estimating a revenue weighted-average spread for each drug and then applying the weighted-spread to all years and NDCs of that drug. If the weighted-spread is less than 30% for any drug, damages are set to zero for that drug.

*Contains Highly Confidential Materials
Subject to Protective Order*

Table 1: Summary of Damages Using Alternate Methods of Aggregation

			Non-Medicare, TPPs and Consumers (Massachusetts– Sub-Class 3)	
Company	Drug	NDC	Dr. Hartman's Estimates (1)	Aggregation Across Years/Across NDCs and Years (2)
Panel A				
Bristol Myers-Squibb	Taxol	00015347911	\$436,107	\$199,831
Johnson & Johnson	Procrit	59676032001	\$264,112	\$163,413
Schering-Plough	Intron	00085053901	\$176,536	\$123,489
Panel B				
Bristol Myers-Squibb	Taxol	All	\$725,791	\$257,524
Johnson & Johnson	Procrit	All	\$857,924	\$0
Schering-Plough	Intron	All	\$998,399	\$0

Notes and Sources:

- (1) Dr. Hartman's estimates are the damages he calculated in his December 15, 2005 Declaration. The damages will not match those listed in the report because the table does not include Dr. Hartman's extrapolation to years not covered in the data.
- (2) These damages are computed by summing Dr. Hartman's damages across time and NDCs for each drug and subtracting "negative" damages from the total. The negative damages are obtained for those years and NDCs in which the spread for is less than 30%.

*Contains Highly Confidential Materials
Subject to Protective Order*

B. Computation of ASP

132. In his supplemental declaration of February 2006, Dr. Hartman revises his computation of ASP by including data on certain hospitals and HMOs.¹³³ The result of this revision is that for many drugs the ASP (spread) is significantly lower (higher) than what was computed in his December 15, 2005 declaration. Consequently, many NDCs that were below the 30% liability threshold in the earlier Declaration crossed the threshold in the supplemental Declaration. Table 2 shows examples of such NDCs.
133. The substantial change in the ASPs and spreads cast doubt on Dr. Hartman's liability theory and damage methodology. In particular, the results in Table 2 undermine Dr. Hartman's key liability assumption that the AWP is a signal for ASP calculated for PADs in this proceeding. It is evident that the same AWP is associated with several different ASPs; the ASPs for hospitals and HMOs are lower than those for physicians in many cases. Moreover, calculating a single ASP over all classes of trade solves the multiple-ASP problem, but only by creating another problem for the damage calculation. If there is a significant difference in ASPs by class of trade as the patterns in Table 3 suggest, it is not justifiable for Dr. Hartman to include hospitals and HMOs in the calculations for ASP in his damage calculation. The mixing of the classes of trades leads to an overestimation of damages at the aggregate level for physician-administered drugs, because class members are being awarded damages due to larger spreads to non-class members (hospitals and HMOs). Table 2, in fact, shows that calculating damages based on the revised ASPs will award damages to class members for certain drugs even though prices to their providers do not create spreads that exceed their expectations as measured by the Hartman "yardstick."

¹³³ For example, for BMS Dr. Hartman includes data on civilian hospitals, community health care clinics, and various types of HMOs. These data were not included in the calculation of ASP in the December 15, 2005 Declaration.

*Contains Highly Confidential Materials
Subject to Protective Order*

Table 2: ASPs and Spread in Supplemental vs. Original Declarations

Drug	NDC	Year	Original ASP (\$)	Original Spread (%)	New ASP (\$)	New Spread (%)
Cytosan	00015054812	1998	41.14	25.01	19.40	165.08
Taxol	00015347520	2000	146.10	25.00	135.11	35.17
Vepesid	00015309530	1996	108.00	26.38	66.82	104.26
Kytril	00029415105	1999	694.43	29.16	634.87	41.27
Lanoxin	00173026035	1997	79.79	20.69	55.88	72.34
Ventolin	00173038558	1992	12.23	21.52	9.88	50.42
Zofran	00173044702	1999	2,025.16	25.34	1,799.71	41.04
Intron	00085057106	1997	496.90	26.82	394.69	59.66
Proventil	00085020901	1991	26.39	18.00	21.70	43.52

Notes and Sources:

- (1) Original ASP and Spreads source: Hartman workbooks "X Liability Damages.xls", where X is the respective defendant.
- (2) New ASP and Spreads source: Hartman workbooks "X Liability Damages - Revised ASP.xls", where X is the respective defendant.

*Contains Highly Confidential Materials
Subject to Protective Order*

C. Assumption of 97.5% Reimbursement Rate

134. In computing damages for drugs in Sub-Class 3, Dr. Hartman applies a reimbursement rate of 97.5% to all NDCs and all time periods. He justifies this assumption by referencing the survey conducted by Dyckman & Associates on behalf of MedPAC in 2002. That survey provided information on average reimbursement rates for AWP for 32 Health Plans and showed that the average (of the average reimbursement rate) across all plans was 97.5%.¹³⁴
135. Notwithstanding the sample selection, geographic scope, and temporal issues of the survey, the reimbursement rates cited by the survey for each TPP was the *average* for that payor. An average does not reveal information on the degree of variation in the data points that are averaged. As a result, a payor might reimburse physician groups at different rates and the different reimbursement rates may be associated with different drug usage patterns. For example, a TPP with an average reimbursement rate of 97.5% of AWP might be reimbursing two different drugs at 88% and 108% of AWP, respectively. In such a case, applying a 97.5% average to each drug will generate unreliable estimates of damages.
136. This problem is illustrated in Table 3, which presents the J-code level distribution of reimbursement rates for five drugs for Blue Cross and Blue Shield of Kansas City (BCBS KC).¹³⁵ The distribution for each J-code is generated using transaction-level data on reimbursements by BCBS KC to various providers. As shown in the table, there is a wide variation in reimbursement rates across these drugs.¹³⁶ For example, for Taxol, less than 1%

¹³⁴ MedPAC Study, p. 17.

¹³⁵ A “J-code” is a code established by the Centers for Medicare and Medicaid Services (CMS) to enable the providers/physicians to bill for the drugs administered in their offices.

¹³⁶ The reimbursement rates are computed by taking the ratio of the “allowed amount” in the BCBS KC data to the AWP data provided by Dr. Hartman. The AWP is adjusted to a per unit value by using the units listed in the crosswalk “January 2006 ASP NDC-HCPS Crosswalk” taken from www.cms.hhs.gov. The transactions that were plausibly not based on AWP are omitted. These include reimbursements to “outside the network” providers, reimbursements to hospitals, and reimbursements for drugs facing generic competition. The transactions referencing Medicare-related reimbursements were also dropped as they do not apply to Sub-
(continued...)

*Contains Highly Confidential Materials
Subject to Protective Order*

of transactions showed a reimbursement rate less than 85% of AWP, while more than 75% of the transactions showed a reimbursement rate of more than 85% of AWP. On the other hand, for Navelbine, the corresponding figures were 30% and 43% of transactions. The weighted-average reimbursement rate for Taxol is 96.4% while it is 87.6% for Navelbine. This variation demonstrates that Dr. Hartman's methodology of using a TPP level average reimbursement rate and then averaging the reimbursement rates across all plans (to arrive at an overall number of 97.5% to be applied to each NDC) is unreliable. It will lead to incorrect estimates of damages for individual defendants whenever the drugs that are the subject of the litigation have reimbursement rates that differ from the average.

¹³⁶ (...continued)

Class 3. The "Unclear" category includes transactions that were odd multiples of AWP (e.g. 200% of AWP) and thus reflect errors in units, as well as other reimbursement rates that did not have a clear relationship to AWP. It is assumed that all remaining transactions were based on AWP, although it should be noted that for a sizeable portion of these transactions the reimbursed amount equaled the "billed charge". To the extent that the billed charge is not based on AWP, these transaction were also not linked to AWP. This problem can only be resolved through case-by-case inquiry.

*Contains Highly Confidential Materials
Subject to Protective Order*

Table 3: Reimbursement Rates by BCBS Kansas City

	Distribution of Reimbursement Rates (%) by Drug / J-Code				
Reimbursement Rate as % of AWP	Zoladex J9202	Taxol J9265	Imitrex J3030	Navelbine J9390	Remicade J1745
71-75	0.15	0.04	1.66	18.44	0.7
76-80	0.23	0.17	7.46	2.46	3.07
81-85	5.56	0.46	10.5	9.67	5.87
86-90	13.39	8.09	5.52	7.09	1.35
91-95	39.88	8.21	20.72	15.44	72.68
96-100	24.43	59.98	10.77	18.98	3.45
101-105	2.44	1.63	12.98	3.24	0.59
Unclear	13.93	21.43	30.39	24.68	12.28
<i>Total</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>
Weighted Average Reimbursement Rate	93.20%	96.41%	91.65%	87.55%	91.83%
Number of Transactions	1,314	2,399	362	1,665	1,856

Notes and Sources:

- (1) Payor data provided by BCBS Kansas City.
- (2) AWP data provided by Dr. Hartman.
- (3) Payor data is modified to exclude: adjustments, zero reimbursements, Medicare transactions, "Outside" network providers, and reimbursements to hospitals.
- (4) Analysis is restricted to time period before drug became generic, if applicable. The time periods for each drug are: Zoladex (1995-2004); Taxol (1998-2001); Imitrex (1995-2003); Navelbine (1995-2003); Remicade (2000-2003).
- (5) "Unclear" refers to transactions with reimbursement rates that fall outside 71% - 105% of AWP. These include transaction that are odd multiples of AWP (e.g. 200% of AWP) and thus reflect errors in units.
- (6) Weighted Average Reimbursement Rate calculation excludes transactions considered "Unclear"

*Contains Highly Confidential Materials
Subject to Protective Order*

D. Use of NAMCS Data

137. Finally, Dr. Hartman uses data from the National Ambulatory Medical Care Survey (NAMCS) to allocate total sales of physician administered drugs between Medicare Part B and non-Medicare payors. It appears that for some drugs, Dr. Hartman has relied on very few observations to estimate the allocations. The National Center for Health Statistics (NCHS) which conducts the NAMCS survey warns that estimates based on fewer than 30 records are unreliable.¹³⁷ In particular, reliance on very few observations implies that there is imprecision in the estimation of Medicare/non-Medicare proportions which could have a significant impact on the damages estimates. The NAMCS data has 8 observations for Alkeran, 9 for Navelbine, 7 for Retrovir, and 9 for Intron.

¹³⁷ 2003 NAMCS Micro-Data File Documentation, p. 7.

*Contains Highly Confidential Materials
Subject to Protective Order*

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: March 21, 2006

By: 
Daniel L. McFadden

*Contains Highly Confidential Materials
Subject to Protective Order*

APPENDIX A: DANIEL L. MCFADDEN CV

DANIEL L. McFADDEN**Principal**

Professor Daniel McFadden is a principal with *The Brattle Group*, which provides consulting services and expert testimony on economic, finance, regulatory and strategic issues to corporations, law firms and public agencies worldwide.

Professor Daniel McFadden, recipient of the 2000 Nobel Prize in Economics, is the E. Morris Cox Professor of Economics at the University of California at Berkeley and was previously the James R. Killian Professor of Economics at MIT. He was awarded the Nobel Prize for his numerous contributions to quantitative economic science and, in particular, his pioneering theoretical, methodological, and empirical work in the analyses of discrete choices. Dr. McFadden has received numerous other awards including the John Bates Clark Medal given every two years to the American economist under the age of forty who has made the most outstanding contribution to the field of economic science. Dr. McFadden received his Ph.D. in Economics from the University of Minnesota in 1962. There he also earned his B.S. in Physics, with high distinction, in 1957.

Dr. McFadden has also held the following academic appointments:

- 1996- • Director, Econometrics Laboratory, University of California, Berkeley
- 1995-1996 • Chair, Department of Economics, University of California, Berkeley
- 1991-1995 • Director, Econometrics Laboratory, University of California, Berkeley
- 1990- • E. Morris Cox Chair, University of California, Berkeley
- 1990- • Professor of Economics, University of California, Berkeley
- 1990 • Sherman Fairchild Distinguished Scholar, California Institute of Technology
- 1986-1991 • Director, Statistics Center, Massachusetts Institute of Technology
- 1984-1991 • James R. Killian Chair, Massachusetts Institute of Technology
- 1978-1991 • Professor of Economics, Massachusetts Institute of Technology
- 1977-1978 • Irving Fisher Research Professor, Yale University
- 1968-1979 • Professor of Economics, University of California, Berkeley
- 1966-1967 • Visiting Associate Professor, University of Chicago
- 1966-1968 • Associate Professor of Economics, University of California, Berkeley
- 1963-1966 • Assistant Professor of Economics, University of California, Berkeley
- 1962-1963 • Assistant Professor of Economics, University of Pittsburgh
- 1961-1962 • Instructor, Economics, University of Minnesota
- 1959-1960 • Research Assistant, Social Psychology, University of Minnesota

DANIEL L. McFADDEN
Principal

2

1957-1958 • Instructor, Physics, University of Minnesota

Dr. McFadden is a member of the following organizations:

- American Economics Association
- The Econometric Society
- American Statistical Association
- Mathematical Association of America
- Transportation Research Board

Fellowships, scholarships, honors, and awards given to Dr. McFadden include:

- 2004 • Honorary Degree, University of Montreal
- 2003 • Honorary Degree, University College London
- 2000-2001 • Richard Stone Prize in Applied Econometrics
- 2000 • Nobel Prize in Economics (Joint Recipient)
- 2000 • Nemmers Prize in Economics, Northwestern University
- 1994 • American Agricultural Economics Association, Best Paper Prize
- 1992 • University of Chicago, LLD
- 1986 • Frisch Medal, Econometric Society
- 1981 • Elected to National Academy of Science
- 1981 • Outstanding Teacher Award, MIT
- 1979 • Fisher-Schultz Lecture, Econometrics Society
- 1977 • Elected to American Academy of Arts and Sciences
- 1975 • John Bates Clark Medal, American Economics Association
- 1969 • Elected Fellow, Econometrics Society
- 1966-1967 • Ford Faculty Research Fellow
- 1962-1963 • Mellon Post-Doctoral Fellow
- 1960-1961 • Earhart Fellow
- 1958-1962 • Ford Foundation Behavioral Science Fellow

ADDITIONAL EXPERIENCE

Dr. McFadden has had a varied background in professional and public service. Among his achievements are:

- 2005 • President, American Economic Association (AEA)
- 2003- • Chair, National Academy of Science (NAS) Section 54 Economic Sciences
- 1997-2000 • Chair, NAS Committee on Methods of Forecasting Demand and Supply of Doctoral Scientists and Engineers
- 1996- • Advisory Committee, Journal of Applied Economics
- 1995- • NAS Commission on Science, Engineering, and Public Policy
- 1994- • Chair, AEA Committee on Electronic Publication

DANIEL L. McFADDEN
Principal

3

-
- 1994 • Vice President, American Economics Association
 - 1989-1994 • NAS Committee on Behavioral and Social Sciences and Education
 - 1988-1991 • Panel Study of Income Dynamics, Advisory Board
 - 1985-1987 • Executive Committee, American Economics Association
 - 1985 • President, Econometric Society
 - 1983-1986 • Executive Committee, Econometric Society
 - 1983-1986 • Council of the Econometric Society
 - 1983-1984 • Vice President, Econometric Society
 - 1983-1984 • NAS Committee on Energy Demand Modeling
 - 1982-1987 • NAS Committee, Basic Research in the Social Sciences
 - 1981-1984 • Chair, AEA Awards Committee
 - 1980-1983 • Board of Directors, National Bureau of Economic Research
 - 1980-1983 • Editor, Econometric Society Monographs
 - 1979 • Review Committee, California Energy Commission
 - 1977-1979 • Sloan Foundation Book Committee
 - 1978-1980 • Executive Committee, Econometric Society
 - 1978-1980 • Board of Editors, Transportation Research
 - 1977-1978 • Associate Editor, Journal of Econometrics
 - 1976-1977 • Board of Directors, National Bureau of Economic Research
 - 1975-1978 • Executive Committee, Transportation Research Board
 - 1975-1976 • City of Berkeley, Coordinated Transit Project
 - 1975 • Advisory Committee on Transportation Models, Metropolitan
Transportation Commission
 - 1974-1980 • Council of the Econometric Society
 - 1974-1977 • Elected Member, Universities National Bureau
 - 1973-1977 • Board of Editors, Journal of Mathematical Economics
 - 1971-1974 • Board of Editors, American Economic Review
 - 1970- • Chair, NSF-NBER Conference, Economics of Uncertainty
 - 1969-1971 • Economics Advisory Panel, National Science Foundation
 - 1968-1970 • Editor, Journal of Statistical Physics

MIT - RELATED:

- Committee on Curricula, 1990-91
- Killian Award Committee, 1984
- Center for Energy Policy Research, Program Board, 1983-84
- Engineering Dean Search Committee, 1980-81
- Provost's Committee on Statistics, 1979-80
- CTS Advisory Board, 1978-79

BERKELEY - RELATED:

- Director of Graduate Studies, 1994-95
- IBER Advisory Committee, 1993-95 (Chair, 1994-95)

DANIEL L. McFADDEN
Principal

4

BIBLIOGRAPHY

Books and Monographs

Essays on Economic Behavior Under Uncertainty, with M. Balch and S. Wu (eds.), North Holland: Amsterdam, 1974.

Urban Travel Demand: A Behavioral Analysis, with T. Domencich, North Holland: Amsterdam, 1975. Reprinted by The Blackstone Company: Mount Pleasant, MI, 1996.

Production Economics: A Dual Approach to Theory and Applications, with M. Fuss (eds.), North Holland: Amsterdam, 1978.

Structural Analysis of Discrete Data with Econometric Applications, with C.F. Manski (eds.), MIT Press: Cambridge, MA, 1981.

Microeconomic Modeling and Policy Analysis: Studies in Residential Energy Demand, with T. Cowing, Academic Press: New York, 1984.

Preferences, Uncertainty, and Optimality: Essays in Honor of Leonid Hurwicz, with J. Chipman and M.K. Richter (eds.), Westview Press: Boulder, CO, 1990.

Handbook of Econometrics Vol IV, with R. Engle (eds.), North Holland: Amsterdam, 1994.

Statistical Tools, manuscript in preparation.

Articles

Production Theory

"Constant Elasticity of Substitution Production Functions," *Review of Economic Studies*, 1963.

"A Review of 'Manufacturing Production Functions in the U.S., 1957: An Interindustry and Interstate Comparison of Productivity'," *Journal of the American Statistical Association*, March 1967.

"Cost, Revenue, and Profit Functions," in M. Fuss and D. McFadden (eds.), *Production Economics: a Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

"A Survey of Functional Forms in the Economic Analysis of Production," with M. Fuss and Y. Mundlak, in M. Fuss and D. McFadden (eds.), *Production Economics: a Dual Approach to Theory and Applications*, Vol. I, 219-268, North Holland: Amsterdam, 1978.

DANIEL L. McFADDEN
Principal

5

“The General Linear Profit Function,” in M. Fuss and D. McFadden (eds.), *Production Economics: a Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

“Flexibility Versus Efficiency in Ex Ante Plant Design,” with M. Fuss, in M. Fuss and D. McFadden (eds.), *Production Economics: a Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

“Estimation Techniques for the Elasticity of Substitution and Other Production Parameters,” in M. Fuss and D. McFadden (eds.), *Production Economics: A Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

“Measurement of the Elasticity of Factor Substitution and Bias of Technical Change,” with P. Diamond and M. Rodriguez, in M. Fuss and D. McFadden (eds.), *Production Economics: A Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

“Joint Estimation of Freight Transportation Decisions Under Nonrandom Sampling,” with C. Winston and A. Boersch-Supan, in A. Daughety (ed.), *Analytical Studies in Transport Economics*, 137-157, Cambridge University Press: Cambridge, 1985.

Econometrics

“Conditional Logit Analysis of Qualitative Choice Behavior,” in P. Zarembka (ed.), *Frontiers in Econometrics*, 105-142, Academic Press: New York, 1973.

“Comments on ‘Estimation of a Stochastic Model of Reproduction: An Econometric Approach’,” in N. Terleckyj (ed.), *Household Production and Consumption*, 139-145, National Bureau of Economic Research: New York, 1975.

“The Revealed Preferences of a Government Bureaucracy: Theory,” *The Bell Journal of Economics and Management Science*, Autumn 1975.

“The Revealed Preferences of a Government Bureaucracy: Empirical Evidence,” *The Bell Journal of Economics and Management Science*, No. 1, 55-72, Spring 1976.

“A Comment on Discriminant Analysis ‘Versus’ Logit Analysis,” *Annals of Economic and Social Measurement*, 1976.

“Quantal Choice Analysis: A Survey,” *Annals of Economic and Social Measurement*, 1976.

“Econometric Models for Probabilistic Choice Among Products,” *The Journal of Business*, 1980.

DANIEL L. McFADDEN
Principal

6

“Econometric Models of Probabilistic Choice,” in C.F. Manski and D. McFadden (eds.), *Structural Analysis of Discrete Data with Econometric Applications*, 198-272, MIT Press: Cambridge, MA, 1981.

“Alternative Estimators and Sample Designs for Discrete Choice Analysis,” with C.F. Manski, in C.F. Manski and D. McFadden (eds.), *Structural Analysis of Discrete Data with Econometric Applications*, 2-50, MIT Press: Cambridge, MA, 1981.

“Qualitative Response Models,” in W. Hildenbrand (ed.), *Advances in Econometrics: Invited Papers for the Fourth World Congress of the Econometric Society*, Econometric Society Monograph, 1-37, Cambridge University Press: Cambridge, 1982.

“Specification Tests for the Multinomial Logit Model,” with J. Hausman, *Econometrica*, September 1984.

“Econometric Analysis of Qualitative Response Models,” in Z. Griliches and M. Intrilligator (eds.), *Handbook of Econometrics*, Elsevier: Amsterdam, 1984.

“Comment on Technical Problems in Social Experimentation: Cost versus Ease of Analysis,” in J.A. Hausman and D.A. Wise (eds.), *Social Experimentation*, 214-219, National Bureau of Economic Research: Chicago, 1985.

“The Choice Theory Approach to Market Research,” *Marketing Science*, Fall 1986.

“The Demand for Local Telephone Service: A Fully Discrete Model of Residential Calling Patterns and Service Choices,” with K. Train and M. Ben-Akiva, *The Rand Journal of Economics*, Spring 1987.

“Regression-Based Specification Tests for the Multinomial Logit Model,” *Journal of Econometrics*, 1987.

“What do Microeconometricians Really Do?” *Proceedings of the American Statistical Association*, 402-405, Business Statistics Section, 1987.

“Comment on Joel Horowitz and George Neumann, Semiparametric Estimation of Employment Duration Models,” with A. Han, *Econometric Reviews*, 1987/1988.

“Econometric Modeling of Locational Behavior,” *Annals of Operations Research: Facility Location Analysis: Theory and Applications*, 1989.

“A Method of Simulated Moments for Estimation of Discrete Response Models Without Numerical Integration,” *Econometrica*, September 1989.

DANIEL L. McFADDEN
Principal

7

“Testing for Stochastic Dominance,” in T. Fomby and T.K. Seo (eds.), *Studies in the Economics of Uncertainty*, 113-134, Springer: New York, 1989.

“Micro-simulation of Local Residential Telephone Demand Under Alternative Service Options and Rate Structures,” with T. Atherton, M. Ben-Akiva, and K. Train, in A. de Fontenay, M. Shugard, and D. Sibley (eds.), *Telecommunications Demand Modelling*, 137-163, Elsevier: Amsterdam, 1990.

“Advances in Computation, Statistical Methods, and Testing of Discrete Choice Models,” *Marketing Letters*, 1991.

“Efficient Estimation by Multinomial Approximation and Sequential Simulation,” with W. Beckert and A. Eymann, Working Paper, July 1994.

“Large Sample Estimation and Hypothesis Testing,” with W. Newey, in R. Engle and D. McFadden, (eds.) *Handbook of Econometrics*, North Holland: Amsterdam, 1994.

“Estimation by Simulation,” with P. Ruud, *The Review of Economics and Statistics*, November 1994.

“Simulation of Multivariate Normal Rectangle Probabilities and Their Derivatives: Theoretical and Computational Results,” with V. Hajivassiliou and P. Ruud, *Journal of Econometrics*, May-June 1996.

“Lectures on Simulation-Assisted Statistical Inference,” presented at the EC-squared Conference, Florence, Italy, December 12, 1996.

“Estimation of Some Partially Specified Nonlinear Models,” with C. Ai, *Journal of Econometrics*, January-February 1997.

“Modeling Methods for Discrete Choice Analysis,” with M. Ben-Akiva, et al., *Marketing Letters*, July 1997.

“The Method of Simulated Scores with Application to Models of External Debt Crises,” with V. Hajivassiliou, *Econometrica*, July 1998.

“Estimating Features of a Distribution from Binomial Data,” with A. Lewbel, Working Paper, May 1997.

“Mixed MNL Models for Discrete Response,” with K. Train, Working Paper, December 1996, revised November 1998.

“On Selecting Regression Variables to Maximize Their Significance,” Working Paper, July 1998.

DANIEL L. McFADDEN
Principal

8

"Economic Choices," Nobel Lecture, December 2000. *American Economic Review*, June 2001.

"Observational Studies: Choice-based sampling," forthcoming in *International Encyclopedia of Social and Behavior Sciences*, Vol. 2.1, Article 92, Elsevier Science: Amsterdam, 2001.

"Discrete Choice Models Incorporating Revealed Preferences and Psychometric Data," with T. Morikawa and M. Ben-Akiva, *Econometric Models In Marketing*, Vol. 16, 27-53, Elsevier Science: Oxford, 2002.

"Characteristics of Generalized Extreme Value Distributions," with M. Bielaire and D. Bolduc, Working Paper, April, 2003

"Structural Simulation of Facility Sharing: Unbundling Policies and Investment Strategy in Local Exchange Markets," by Nauman Ilias, Paul C. Liu, Daniel L. McFadden, Lisa Wood, Glenn A. Woroch & William P. Zarakas, 2005.

Transportation

"The Measurement of Urban Travel Demand," *Journal of Public Economics*, 303-328, 1974.

"Aggregate Travel Demand Forecasting from Disaggregated Behavioral Models," with F. Reid, *Transportation Research Record: Travel Behavior and Values*, No. 534, 24-37, 1975.

"The Mathematical Theory of Demand Models," in P. Stopher and A. Meyburg (eds.), *Behavioral Travel-demand Models*, 305-314, D.C. Heath and Co.: Lexington, MA, 1976.

"Demand Model Estimation and Validation," with A.P. Talvitie and Associates, *Urban Travel Demand Forecasting Project, Final Report, Volume V*, Institute of Transportation Studies, University of California, Berkeley, June 1977.

"Demographic Data and Policy Analysis," with S. Cosslett, G. Duguay, and W. Jung, *Urban Travel Demand Forecasting Project, Final Report*, Institute of Transportation Studies, University of California, Berkeley, June 1977.

"Quantitative Methods for Analyzing Travel Behaviour of Individuals: Some Recent Developments," in D. Hensher and P. Stopher (eds.), *Behavioural Travel Modelling*, 279-318, Croom Helm London: London, 1978.

"An Application of Diagnostic Tests for the Independence from Irrelevant Alternatives Property of the Multinomial Logit Model," with W. Tye and K. Train, *Transportation Research Record: Forecasting Passenger and Freight Travel*, No. 637, 39-46, Transportation Research Board, 1978.

DANIEL L. McFADDEN
Principal

9

“Modelling the Choice of Residential Location,” in A. Karlqvist, L. Lundqvist, F. Snickars, and J. Weibull (eds.), *Spatial Interaction Theory and Planning Models*, 75-96, North Holland: Amsterdam, 1978. Reprinted in J. Quigley (ed.), *The Economics of Housing*, Edward Elgar: London, 1997.

“The Goods/Leisure Tradeoff and Disaggregate Work Trip Mode Choice Models,” with K. Train, *Transportation Research*, February 1978.

“The Theory and Practice of Disaggregate Demand Forecasting for Various Modes of Urban Transportation,” in *Emerging Transportation Planning Methods*, U.S. Department of Transportation DOT-RSPA-DPB-50-78-2, August 1978. Reprinted in T.H. Oum, et al. (eds.), *Transport Economics: Selected Readings*, 51-80, Seoul Press: Seoul, 1995.

“Overview and Summary: Urban Travel Demand Forecasting Project,” with F. Reid, A. Talvitie, M. Johnson, and Associates, *The Urban Travel Demand Forecasting Project, Final Report, Volume I*, Institute of Transportation Studies, University of California, Berkeley, June 1979.

“Measuring Willingness-to-Pay for Transportation Improvements” in T. Gärling, T. Laitila, and K. Westin (eds.) *Theoretical Foundations of Travel Choice Modeling*, 339-364, Elsevier Science: Amsterdam, 1998.

“Disaggregate Behavioral Travel Demand’s RUM Side: A 30-Year Retrospective,” forthcoming in *The Leading Edge of Travel Behavior Research*, Davide Heshner and J. King (eds.) Pergamon Press: Oxford, 2002.

Economic Growth and Development

“Comment on ‘An Optimum Fiscal Policy in an Aggregate Model of Economic Growth’,” in I. Adelman and E. Thorbecke (eds.), *The Theory and Design of Economic Development*, 140-146, Johns Hopkins Press: Baltimore, MD, 1966.

“The Evaluation of Development Programmes,” *The Review of Economic Studies*, 1967.

“On the Existence of Optimal Development Plans,” in H. Kuhn (ed.) *Proceedings of the Sixth Princeton Symposium on Mathematical Programming*, 403-427, Princeton University Press: Princeton, NJ, 1970.

“Criteria for Public Investment: Comment,” *The Journal of Political Economy*, November/December 1972.

“On the Existence of Optimal Development Programmes in Infinite-Horizon Economies,” in J. Mirrlees and N.H. Stern (eds.), *Models of Economic Growth*, 260-282, Macmillan: Great Britain, 1973.

DANIEL L. McFADDEN
Principal

10

"Is There Life After Debt? An Econometric Analysis of the Creditworthiness of Developing Countries," with R. Eckaus, G. Feder, V. Hajivassiliou, and S. O'Connell, in J. Cuddington and G. Smith, *International Debt and the Developing Countries*, 179-209, International Bank for Reconstruction and Development/The World Bank: Washington, D.C., 1985.

Economic Theory and Mathematical Economics

"On Hicksian Stability," in J.N. Wolfe (ed.), *Value, Capital, and Growth*, 329-351, University Press: Edinburgh, 1969.

"On the Controllability of Decentralized Macroeconomic Systems: The Assignment Problem," in H.E. Kuhn and P. Szego (eds.), *Mathematical Systems Theory and Economics 1*, 221-239, Springer-Verlag: New York, 1969.

"A Simple Remark on the Second Best Pareto Optimality of Market Equilibria" *Journal of Economic Theory*, June 1969.

"A Technical Note on Classical Gains from Trade," with J.M. Grandmont, *Journal of International Economics*, 1972.

"On Some Facets of Betting: Comments," in M.S. Balch, D. McFadden, and S.Y. Wu (eds.), *Essays on Economic Behavior Under Uncertainty*, 126-137, North-Holland: Amsterdam, 1974.

"Some Uses of the Expenditure Function in Public Finance," with P.A. Diamond, *Journal of Public Economics*, 1974. Reprinted in J. Creedy (ed.), *Measuring Welfare Changes and Tax Burdens*, Edward Elgar: London, September 1998.

"A Characterization of Community Excess Demand Functions," with R. Mantel, A. Mas-Colell, and M.K. Richter, *Journal of Economic Theory*, 1974.

"An Example of the Non-Existence of Malinvaud Prices in a Tight Economy," *Journal of Mathematical Economics*, 1975.

"Tchebyscheff Bounds for the Space of Agent Characteristics," *Journal of Mathematical Economics*, 1975.

"On Efficiency and Pareto Optimality of Competitive Programs in Closed Multisector Models," with M. Majumdar and T. Mitra, *Journal of Economic Theory*, August 1976.

"Definite Quadratic Forms Subject to Constraint," in M. Fuss and D. McFadden (eds.), *Production Economics: A Dual Approach to Theory and Applications*, North-Holland: Amsterdam, 1978.

DANIEL L. McFADDEN
Principal

11

"Necessary and Sufficient Conditions for the Classical Programming Problem," in M. Fuss and D. McFadden (eds.), *Production Economics: A Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

"Convex Analysis," in M. Fuss and D. McFadden (eds.), *Production Economics: A Dual Approach to Theory and Applications*, North Holland: Amsterdam, 1978.

"A Note on the Computability of Tests of the Strong Axiom of Revealed Preference," *Journal of Mathematical Economics*, 1979.

"Pareto Optimality and Competitive Equilibrium in Infinite Horizon Economies," with M. Majumdar and T. Mitra, *Journal of Mathematical Economics*, 1980.

"Welfare Analysis of Incomplete Adjustment to Climatic Change," in V.K. Smith and A. White (eds.), *Advances in Applied Micro-economics*, JAI Press: Greenwich, CT, 1984.

"Stochastic Rationality and Revealed Stochastic Preference," with M.K. Richter, in J. Chipman, D. McFadden, and M.K. Richter (eds.), *Preferences, Uncertainty, and Optimality, Essays in Honor of Leo Hurwicz*, 161-186, Westview Press: Boulder, CO, 1990.

"Consumers' Evaluation of New Products: Learning from Self and Others," with K. Train, *Journal of Political Economy*, 1996.

"Economic Choice Behavior: Psychological Foundations and the Contributions of Amos Tversky," Working Paper, August 1996.

"Rationality for Economists," Working Paper presented at the NSF Symposium on Eliciting Preferences, July 1997. Forthcoming in *Journal of Risk and Uncertainty*, December 1999.

"Extended Framework for Modeling Choice Behavior," with M. Ben-Akiva, et al. *Marketing Letters*, Vol. 10, Issue 3, Kluwer, 187-203, August 1999.

"Pricing in a Competitive Market with a Common Network Resource," Working Paper, April 2003

"Hybrid Choice Models: Progress and Challenges," with M. Ben-Akiva et. Al., *Marketing Letters*, Vol. 13, Issue 3, 163-175, August 2002.

"Epilogue," *Marketing Letters*, Vol. 13, Issue 3, 163-175, August 2002.

"Revealed Stochastic Preference: A Synthesis," Working Paper, February 2004.

"Welfare Economics at the Extensive Margin Giving Gorman Polar Consumers Some Latitude," Working Paper, June 2004.

DANIEL L. McFADDEN
Principal

12

"The Misuse of Econometrics in Litigation," by Susan J. Guthrie, Paul C. Liu, Daniel L. McFadden and Kenneth T. Wise, *ABA Monograph on Econometrics*, Forthcoming, 2005

"The Misuse of Econometrics in Estimating Damages," with Kenneth T. Wise, et. al. *ABA monograph on Econometrics*, Forthcoming, 2005.

"The Browser War - Econometric Analysis of Markov Perfect Equilibrium in Markets with Network Effects," with Mark Jenkins et. al. Presented at the American Economic Association Annual Meeting. 7-9 January 2005. Philadelphia, PA.

"The Science of Pleasure: The Measurement of Consumer Welfare," Frisch Memorial Lecture, Plenary Session at the Econometric Society World Congress, upcoming, 19-24 August 2005, University College London.

Energy

"Forecasting the Impacts of Alternative Electricity Rate Structures: A Feasibility Study," Final Report, California Energy Commission, 1976.

"Determinants of the Long-Run Demand for Electricity," with C. Puig and D. Kirshner, *Proceedings of the American Statistical Association*, 1978.

"A Two-Level Electricity Demand Model," with J. Hausman and M. Kinnucan, *Journal of Econometrics*, 1979.

"Residential Energy Demand Modeling and the NIECS Data Base: An Evaluation," with T. Cowing and J. Dubin, Report No. MIT-EL-82-009, MIT Energy Laboratory, January 1982.

"An Analysis of the Distributional Impacts of Energy Policies Affecting Residential Energy Demand: The ORNL Model," with J. Berkovec, T. Cowing, and J. Rust, Discussion Paper No. MIT-EL-82-032WP, MIT Energy Laboratory, April 1982.

"An Analysis of the Distributional Impacts of Energy Policies Affecting Residential Energy Demand: The REEPS Model," with T. Cowing, Discussion Paper No. MIT-EL 82-057WP, MIT Energy Laboratory, April 1982.

"An Evaluation of the ORNL Residential Energy Use Model," *EPRI Report EA-2442*, Electronic Research Institute: Palo Alto, June 1982.

"The NIECS Data Base and Its Use in Residential Energy Demand Modeling," with T. Cowing and J. Dubin, Discussion Paper No. MIT-EL-82-041WP, MIT Energy Laboratory, June 1982.

DANIEL L. McFADDEN
Principal

13

“A Thermal Model for Single-Family Owner-Occupied Detached Dwellings in NIECS,” with J. Dubin, Discussion Paper No. MIT-EL-040WP, MIT Energy Laboratory, June 1982.

“A Comparative Evaluation of the ORNL and REEPS Models of Residential Energy Demand for Forecasting Residential Energy Policy Impacts,” with J. Berkovec, T. Cowing, and J. Rust, Discussion Paper No. MIT-EL-82-061WP, MIT Energy Laboratory, July 1982.

“Residential End-Use Energy Planning System (REEPS),” with A. Goett, *EPRI Report EA-2512*, Electronic Power Research Institute: Palo Alto, July 1982.

“An Econometric Analysis of Residential Electric Appliance Holdings and Consumption,” with J. Dubin, *Econometrica*, March 1984.

“The Residential End-Use Energy Planning System: Simulation Model Structure and Empirical Analysis,” with A. Goett, in J. Moroney (ed.), *Advances in the Economics of Energy and Resources*, JAI Press: Greenwich, CT, 1984.

“Consumer Attitudes and Voluntary Rate Schedules for Public Utilities,” with K. Train and A. Goett, *the Review of Economics and Statistics*, August 1987.

“Estimating Household Value of Electric Service Reliability with Market Research Data,” with A. Goett and C-K. Woo, *Energy Journal: Special Electricity Reliability Issue*, 1988.

Health Economics

“Estimation of Response Probabilities from Augmented Retrospective Observations,” with D. Hsieh and C. Manski, *Journal of the American Statistical Association*, No. 391, 651-662, September 1985.

“The Dynamics of Housing Demand by the Elderly: Wealth, Cash Flow, and Demographic Effects,” with J. Feinstein, in D. Wise (ed.), *The Economics of Aging*, 55-91, University of Chicago Press: Chicago, 1989.

“The Dynamics of Housing Demand by the Elderly: User Cost Effects,” with C. Ai, J. Feinstein, and H. Pollakowski, in D. Wise (ed.), *Issues in the Economics of Aging*, 33-87, University of Chicago Press: Chicago, 1990.

“Problems of Housing the Elderly in the United States and Japan,” in Y. Noguchi and D. Wise (eds.), *Aging in the United States and Japan*, 109-137, University of Chicago Press: Chicago, 1994.

“Demographics, the Housing Market, and the Welfare of the Elderly,” in D. Wise (ed.), *Studies in the Economics of Aging*, 225-285, University of Chicago Press: Chicago, 1994.

DANIEL L. McFADDEN
Principal

14

"Living Arrangements: Health and Wealth Effects," with A. Boersh-Supan and R. Schnabel, in D. Wise (ed.), *Advances in the Economics of Aging*, 193-216, University of Chicago Press: Chicago, 1996.

"Comment on 'Elderly Health, Housing, and Mobility'," in D. Wise (ed.), *Advances in the Economics of Aging*, 317-320, University of Chicago Press: Chicago, 1996.

"The Impact of Demographics on Housing and Nonhousing Wealth in the United States," with H. Hoynes, in M. Hurd and N. Yashiro (Eds.), *The Economic Effects of Aging in the United States and Japan*, 153-194, University of Chicago Press: Chicago, 1997.

"Subjective Survival Curves and Life Cycle Behavior," with M. Hurd and L. Gan, in D. Wise (ed.), *Inquiries in the Economics of Aging*, 259-305, University of Chicago Press: Chicago, 1998.

"Consumption and Savings Balances of the Elderly: Experimental Evidence on Survey Response Bias," with M. Hurd, et al., in D. Wise (ed.), *Frontiers in the Economics of Aging*, 353-387, University of Chicago Press: Chicago, 1998.

"Healthy, Wealthy, and Wise? Socioeconomic Status, Morbidity, and Mortality among the Elderly," with M. Hurd and A. Merrill, Working Paper, April 1998.

"Predictors of Mortality Among the Elderly," with M. Hurd and A. Merrill, working paper, December 1999. Forthcoming in D. Wise (ed.) *Themes in the Economics of Aging*, University of Chicago Press: Chicago, 2001.

"Comment on Incentive Effects of Social Security Under an Uncertain Disability Option," in D. Wise (ed.) *Themes in the Economics of Aging*, University of Chicago Press: Chicago, 2001

"Response Behavior in Surveys of the Elderly: Experimental Evidence from Internet Surveys" with Joachim Winter, Conference Draft, March 2001.

"Healthy, Wealthy, and Wise? Tests for Direct Causal Paths between Health and Socioeconomic Status", with P. Adams, M. Hurd, A. Merrill, and T. Ribeiro, *Journal of Econometrics*, Vol 112, Issue 1, 3-56, 2003.

"Response" , with P. Adams, M. Hurd, A. Merrill, and T. Ribeiro, *Journal Of Econometrics*, Vol 112, Issue 1, 129-133, 2003.

"Individual Subjective Survival Curves", with L. Gan and M. Hurd, NBER Working Paper No. 9480, January 2003.

"Subjective Mortality Risk and Bequests", with L. Gan, G. Gong and M. Hurd, NBER Working Paper No. 10789, September 2004

DANIEL L. McFADDEN
Principal

15

Environmental Economics

“Assessing Use Value Losses Caused by Natural Resource Injury,” with J.A. Hausman and G. Leonard, in J. Hausman (ed.), *Contingent Valuation: a Critical Assessment*, 341-363, North Holland: Amsterdam, 1993.

“Issues in the Contingent Valuation of Environmental Goods: Methodologies for Data Collection and Analysis,” with G. Leonard, in J. Hausman (ed.), *Contingent Valuation: a Critical Assessment*, 165-208, North Holland: Amsterdam, 1993.

“Contingent Valuation and Social Choice,” *American Journal of Agricultural Economics*, November 1994.

“A Utility-consistent, Combined Discrete Choice and Count Data Model Assessing Recreational Use Losses Due to Natural Resource Damage,” with J. Hausman and G. Leonard, *Journal of Political Economics*, 1995.

“Estimating Natural Resource Damages with and without Contingent Valuation,” by Susan J. Guthrie, Daniel L. McFadden and Kenneth T. Wise, at the 88th Annual Meeting of the Air and Waste Management Association, 1995

“Why is Natural Resource Damage Assessment So Hard?,” Hibbard Lecture, Agricultural and Resource Economics, University of Wisconsin, Madison, May, 1996.

“Measuring Environmental Injury in the Presence of Confounding Risks,” Working Paper, May 1996.

“On the Analysis of Endogenously Recruited Panels,” Working Paper, February 1997.

“Can Meta-analyses of CV Studies Determine Their Reliability?” Working Paper, October 1997.

“Referendum Contingent Valuation, Anchoring, and Willingness to Pay for Public Goods,” with D. Green, K. Jacowitz, and D. Kahneman, *Resource and Energy Economics*, 1998.

“Computing Willingness-to-Pay in Random Utility Models,” in J. Moore, R. Riezman, and J. Melvin (eds.), *Trade, Theory and Econometrics: Essays in Honour of John S. Chipman*, Routledge, forthcoming January 1999.

“Comment on Discussion of Morey and Waldman’s ‘Measurement Error in Recreation Demand Models,’” with K. Train and R. Johnson, *Journal of Environmental Economics and Management*, Vol. 40, pp. 76-81 (2000).

DANIEL L. McFADDEN
Principal

16

EXPERT TESTIMONY & CONSULTING

In an administrative law case, *U.S. DOE vs. Cities Service Corp.*, I prepared written testimony and testified in support of defendant Cities on alleged damages from overcharges. My analysis considered the issue of the marginal cost of production of "new oil" and the econometric techniques appropriate for this analysis. (1987)

In the patent damages case of *Polaroid v. Kodak*, I served as a consulting expert to Polaroid on the economic theory of the case and the methodology used to estimate damages. (1989)

In the case of *U.S. DOJ vs. Exxon Company USA*, arising from the Exxon Valdez oil spill, I prepared for Exxon estimates of damages from loss of recreational opportunities. I was not deposed and did not testify prior to settlement of the case. However, I subsequently testified before a NOAA rule-making committee on some aspects of environmental damage assessment. (1990-1992)

In the case of *Northern Industries vs. Portec*, a contract dispute, I analyzed the market for railroad cranes on behalf of defendant Portec to determine whether the plaintiff was damaged, and critiqued a NERA analysis. I was deposed and testified. (1991-1994)

On behalf of defendant Atlantic Richfield Company, I submitted an expert report and was deposed in the case of *State of Montana vs. ARCO*, which involved contamination of streams arising from historical smelter operations of Anaconda Copper Company. My analysis considered the valuation of damages to consumer welfare from the contamination. (1993-1998)

I was deposed and testified on behalf of the defendants in the Industrial Excess Landfill case, a class action against Goodyear, Goodrich, and Firestone Rubber companies. My analysis focused on the estimation of damages from stigma. (1994-1995)

I was deposed in the case of *Apple Computer vs. ICSOP*. On behalf of the defendants, I analyzed the economic basis for allocation of a settlement between Apple Inc. and Apple Computer in a case involving trademark infringement and licensing of future use. (1995)

I submitted an expert report, an affidavit, and was deposed and testified in the Rocky Flats Plant case, a class action against Dow Chemical and Rockwell. On behalf of the defendants, I critiqued the plaintiffs' and defendants damage analysis, and rendered an opinion on their reliability. (1997-2006)

I submitted an expert report and was deposed in a case alleging unjust enrichment from trade secrets, *American Airlines vs. Northwestern Airlines*. On behalf of the defendant, I critiqued the damage analysis of the plaintiff's experts. (1997)

I submitted an expert report, was deposed, and testified on behalf of Globe Metallurgical who was a defendant in a price-fixing civil anti-trust suit in the ferrosilicon products industry. My

DANIEL L. McFADDEN
Principal

17

analysis focused on the reliability of the methodology used to detect whether plaintiffs were damaged. (1998)

I was a member of a three-person mediation team that mediated a suit in which the State of California and others were the plaintiffs and Bank of America was the Defendant. The case involved damages to the State from a failure of the Bank to return funds from inactive accounts. (1998)

I submitted an amicus brief to a federal appeals court in reference to a Daubert ruling on the econometric analysis of an expert in a civil suit regarding unfair business practices. The issue in that case was whether the methodology used was a reliable indicator of damage to a competitor from alleged anticompetitive conduct. (2000)

I submitted an expert report and was deposed on behalf of Northpoint Communications in *Northpoint Communications vs. Verizon Communications*. My analysis estimated the loss in the market value of Northpoint as a result of a breach of contract by Verizon. (2001)

I submitted an expert report and was deposed on behalf of DuPont in the Choline Vitamins price-fixing litigation. My analysis estimated damages from the alleged anticompetitive conduct. (2001)

I submitted an expert report and was deposed on behalf of General Electric in *State of New Mexico ex rel, vs. General Electric, et al.* Case number CV 99-1254 BSJ and CV 99-1118 BSJ. The case involved the estimation of stigma damages. I submitted an amicus brief to the United States Supreme Court on this issue. (2002)

I submitted an expert opinion and was deposed and testified on behalf of Visa USA in a class-action litigation regarding pricing of foreign exchange services for credit card users. *Schwartz vs. Visa International, et al*, Case number 822404-4. (2002)

I submitted an expert report and was deposed on behalf of Cellnet of Ohio in *Westside Cellular Inc. dba Cellnet of Ohio vs. New Par et.al.* My analysis estimated damages from alleged illegal pricing of access to a telecommunications network. (2002)

I was retained as the damages expert in a patent infringement case involving reasonable royalties for an electronics invention. The case was dismissed. (2002)

I was retained as the damages expert by AOL in the *Netscape v. Microsoft* antitrust case. This case settled prior to submission of an expert report. (2002-2003)

I was retained as the damages expert by Sun Microsystems in *Sun v. Microsoft* antitrust case. This case settled prior to submission of an expert report. (2003-2004)

DANIEL L. McFADDEN
Principal

18

I testified in a private arbitration regarding damages from alleged conduct of a participant in an auction for a company. The principals and issues are confidential. (2003)

I submitted a co-authored amicus brief to the Supreme Court in reference to the regulation of interstate wine shipments. (2004)

I am retained as the damages expert in a patent infringement and commercial practices case involving setting of product standards.

*Contains Highly Confidential Materials
Subject to Protective Order*

APPENDIX B: MATERIALS CONSIDERED

MATERIALS CONSIDERED	
COMPLAINTS AND MOTIONS	
•	<i>Amended Master Consolidated Class Action Complaint, In re Pharmaceutical Industry Average Wholesale Price Litigation</i> , US District Court for the District of Massachusetts, MDL No. 1456, Civil Action: 01-CV-12257-PBS, June 12, 2003
•	<i>Plaintiffs' Motion for Class Certification, In re Pharmaceutical Industry Average Wholesale Price Litigation</i> , US District Court for the District of Massachusetts, MDL No. 1456, Civil Action: 01-CV-12257-PBS, September 3, 2004
DECLARATIONS AND REPORTS	
•	Merits Report & Declaration of Gregory K. Bell, PH.D., March 15, 2006
•	Report of Independent Expert Professor Ernst R. Berndt to Judge Patti B. Saris, February 9, 2005
•	Declaration of Eric M. Gaier, Ph.D. in Support of Defendants' Opposition to Class Certification, October 25, 2004
•	Sur-reply Declaration of Eric M. Gaier, Ph.D. in Support of Defendants' Opposition to Class Certification, January 21, 2005
•	Declaration of Raymond S. Hartman in Support of Plaintiffs' Motion for Class Certification, September 3, 2004
•	Rebuttal Declaration of Dr. Raymond S. Hartman in Support of Plaintiffs' Motion for Class Certification, December 16, 2004
•	Declaration of Raymond S. Hartman in Support of Plaintiffs' Claims of Liability and Calculation of Damages, December 15, 2005
•	Supplemental Declaration of Raymond S. Hartman in Support of Plaintiffs' Claims of Liability and Calculation of Damages: Addendum, February 3, 2006
•	Declaration of Robert P. Navarro in Opposition to the Plaintiffs' Motion for Class Certification
•	Liability Report of Dr. Meredith Rosenthal in Average Wholesale Price Litigation, December 15, 2005
•	Declaration of Stephen W. Schondelmeyer in Support of Plaintiffs' Motion for Class Certification, September 2, 2004
•	Declaration of Harvey J. Weintraub, March 10, 2006
•	Declaration of Halbert L. White, Jr., Ph.D., October 25, 2004
•	Declaration of Steven J. Young in Opposition to the Plaintiffs' Motion for Class Certification, October 25, 2004

MATERIALS CONSIDERED	
DEPOSITIONS	
•	Sheila Cizauskas
•	Jan Cook
•	Deborah Devaux
•	Steven J. Fox
•	Lisa M. Gorman
•	John M. Killion
•	Michael T. Mulrey
•	Eric M. Gaier
•	Raymond S. Hartman
•	Meredith Rosenthal
ARTICLES AND PAPERS	
•	"\$1000 Cash Back: Asymmetric Information in Auto Manufacturer Promotions," Busse, Meghan, Silva-Risso, Jorge, Zettelmeyer, Florian, December 2003
•	"\$1000 Cash Back: The Pass-Through of Auto Manufacturer Promotions," Busse, Meghan, Silva-Risso, Jorge, Zettelmeyer, Florian
•	"A Test of Bargaining Theory in the Auto Retailing Industry," Scott Morton, Fiona, Zettelmeyer, Florian, Silva-Risso, Jorge, July 2004
•	"How the Internet Lowers Prices: Evidence from Matched Survey and Auto Transaction Data," Zettelmeyer, Florian, Scott Morton, Fiona, Silva-Risso, Jorge, 2006
•	"Reform of the Medicare Payment Methods for Cancer Chemotherapy," American Society of Clinical Oncology, May 2001
•	Physicians' Costs for Chemotherapy Drugs (A-02-91-01049), November 6, 1992
•	A Comparison of Albuterol Sulfate Prices (OEI-03-94-00392), June 1996
•	Suppliers' Acquisition Costs for Albuterol Sulfate (OEI-03-94-00393), June 1996
•	Are Medicare Allowances for Albuterol Sulfate Reasonable? (OEI-03-97-00292), August 1998
•	Medicare Reimbursement of Albuterol (OEI-03-00-00311), June 2000
•	Excessive Medicare Reimbursement for Albuterol (OEI-03-01-00410), March 2002

MATERIALS CONSIDERED	
•	Update: Excessive Medicare Reimbursement for Albuterol (OEI-03-03-00510), January 2004
•	Medicare Reimbursement of Prescription Drugs (OEI-03-00310), January 2001
•	Medicaid Pharmacy - Actual Acquisition Cost of Generic Prescription Drug Products (A-06-01-00053), March 2002
•	Medicaid Program Savings Through the Use of Therapeutically Equivalent Generic Drugs (A-06-93-00008), July 1994
•	The Impact of High-Priced Generic Drugs on Medicare and Medicaid (OEI-03-97-00510), July 1998
•	Variation in State Medicaid Drug Prices (OEI-05-02-00681), September 2004
•	Comparing Drug Reimbursement: Medicare and Department of Veterans Affairs (OEI-03-97-00293), November 1998
•	Excessive Medicare Payments for Prescription Drugs (OEI-03-97-00290), December 1997
•	OIG Report Summaries (by State: CA, CO, DC, DE, FL, IN, MD, MO, NC, NE, NJ, TX, VA, WA, WI, WV)
•	Schering Corporation Pricing as of March 31, 2003
•	Plaintiffs' Reference to Schering Corporation Pricing as of March 31, 2003
•	Medicaid Reimbursement Rate Charts (1995, 1996, 1998, 2001, 2003, 2004)
•	"Hooked on Drugs," Alpert, B., <i>Barron's</i> , June 1996